CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA 91125

DIVISION OF BIOLOGY 156-29

November 7, 1977

Dear Beets:

I have read Josh's draft memoir on Ed Tatum that was enclosed in your letter of October 30. Since I don't trust my memory any more than you do yours, I looked up a few of the original papers dealing with the questions you raised. Regarding your point No. 1, Ed had isolated a pure, crystalline material with hormone activity before Butenandt identified the hormone as kynurenine, but he and Haagy did not complete their identification until after Butenandt had published his. Your recollection of the sequence of events is thus correct. Josh should change the sentence on the top of page 2 (marked "A" on the enclosure) to read: "However, before they could complete their arduous work..."

There is another small error in the same sentence. Butendandt did not test kynurenine on the basis of an "insightful speculation about the pathway." He simply tried all known intermediates in tryptophan metabolism and found that kynurenine was active.

In the middle of the same page (marked "B") Josh says that Ed established that biotin was the only growth factor for Neurospora. Actually, this had been shown by Butler, Robbins, and Dodge in a paper published early in 1941.

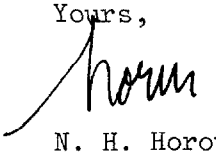
Regarding your point No. 2, I have looked at the paper by Gray and Tatum (PNAS, 1944) and a later one by Tatum (PNAS, 1945) on the production of mutations in E. coli, and in neither one is there any suggestion of the idea that these mutations could be used to look for genetic recombination. Their sole point is to show that mutations can be produced in bacteria, and therefore it is likely that bacteria have genes. I therefore think that Josh's statement is OK. Also, I do not feel that, in a piece like this, it is necessary to mention Gray.

On page 3, in the paragraph marked "C", I think Josh should add to the reasons why Ed continued to work on Neurospora (1) that he became interested in the genetics of morphogenesis, and (2) that Neurospora is a eucaryote and Ed may have seen more challenges in a eucaryotic microorganism than in procaryotes. For example, one of the last studies he did dealt with the possibility of genetic transformation of Neurospora.

I'm glad to hear about your good progress with the origin of corn, and I certainly can't blame you for preferring to work on that, rather than attending boring meetings. I would do the same thing myself, if I were in your place.

With best regards,

Yours,



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